

Environmental and Engineering Services Department

Water

**2010 Operating and Capital Budgets
and
Nine Year Capital Plan**



London
CANADA

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**General Manager of Environmental and
Engineering Services and City Engineer**

Environmental and Engineering Services Department

Water

2010 Budget

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Documents contained in this package are subject to rounding.

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Recommendations

That, on the recommendation of the General Manager of Environmental and Engineering Services and City Engineer, the following actions be taken with respect to the proposed 2010 Operating and Capital Budgets for Water Services:

- a) the 2010 Operating Budget **BE APPROVED** as submitted;
- b) the 2010 Capital Budget **BE APPROVED** as submitted;
- c) the 2011 - 2019 Capital Forecast **BE RECEIVED** for information;
- d) for 2010, all rates and charges related to the provision of Water Services **BE INCREASED** by 8% effective January 1, 2010;
- e) for 2011, all rates and charges related to the provision of Water Services **BE INCREASED** by an additional 8%, effective January 1, 2011, noting that the Operating and Capital Budgets for 2011 will be subject to Council approval subsequent to January 1, 2011; and
- f) the proposed by-laws to amend the Water Rates and Charges By-law **BE INTRODUCED** at the Municipal Council meeting on November 23, 2009.

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Executive Summary

The proposed 2010 Water Operating and Capital Budgets will maintain *London's Advantage* of a safe, clean and secure water supply for this and future generations of Londoners. It is recommended that all rates and charges related to the provision of water services be increased by 8% in keeping with the 20 Year Financial Model approved by Council in November of 2008.

The average cost to the homeowner will increase approximately \$24 per year with annual costs in 2010 of \$317 or approximately 87 cents a day assuming no further reduction in consumption from 2008.

The operating and capital work plans represent a balanced approach to the installation of new infrastructure in conjunction with the Growth Management Implementation Strategy, and the investment and renewal required to sustain existing infrastructure. Reliable infrastructure and performance of the water system are key elements to not only economic development but also quality-of-life and safety in the community. In 2010, efforts continue to further enhance and protect water quality and reliability and to expedite water meter replacements to provide consistently accurate meter readings.

Regulations, increasing standards and legislative obligations continue to require major investments in terms of staff time and financial resources. Staying abreast of regulatory developments and providing early commentary and views, although not always successful, remains a key tactic in helping to shape broader direction and control long term costs. (Examples: Source Water Protection, corrosion control plans). Utilities are continually faced with the renewal needs of an aging infrastructure and high rates of inflation, particularly on construction. Re-thinking past practices and investing in new approaches, while ensuring the reliability of the service, have become fundamental to the daily delivery of clean water.

Budget Drivers

The proposed 2010 Water Budget presents a balanced cost/revenue plan in the amount of \$57.6 million. This represents a 6.5% increase over the 2009 budget. The majority of this increase (5.5%) is required to fund capital for the current and future years through pay-as-you-go increases and reserve fund contributions. It should be noted that although this funding continues to increase, the net impact of 2010 activities will decrease total reserve funds by approximately \$1 million.

The Water Service although not included in the Corporate Budget Target Setting opted to align with other Corporate Departments and target a 0% operating increase for 2010. This has been achieved with the exception of the outside cost of purchasing water from the Elgin Area and Lake Huron Primary Water Supply Systems which is increasing by 7% and 6% respectively. These increases impact approximately 1/3 of the costs of the Service. Nevertheless the Engineering, Operations and Administration proposed budgets have risen by a conservative 1% for 2010. This has been achieved through a number of initiatives including increased vacancy management. Vacancy management is a short term measure that may lead to declaring vacant positions redundant as part of Water's ongoing efforts to make efficiency improvements.

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Explanation of 8% Increase	Increase (\$millions)	Impact on Rate
Capital Related Financing Activities: In order to maintain the water distribution system over the long term, it is necessary to increase spending for sustainability. A portion represents the Council adopted phased-in plan to increase water distribution system maintenance by approximately \$500,000 per year (in 2004 dollars) for 20 years. The remainder has been identified as a requirement for sustainability of the distribution system through long term planning as reported to Council in November 2008 and funding to align with stimulus projects.	\$3.00	5.5%
Subtotal Capital Related	\$3.00	5.5%
Purchase of Water: The City of London purchases water from both the Elgin Area and Lake Huron Primary Water Supply Systems. The unit cost increases for 2010 will be 7% and 6% respectively. The impact is partially mitigated by the reduced consumption estimate.	\$0.91	1.7%
Billing and Administration: Included is a partial transfer of Billing and Administration costs to Wastewater and Treatment to move gradually to a more equitable sharing of these costs.	(0.25)	(0.5%)
Inflation & Operations: Inflationary costs within the budget are applicable primarily on such items as wages, salaries and benefits, and the purchase of goods and services. Vacancy management will be used to mitigate these costs as well as offset some of the increase to Purchase of Water.	(0.12)	(0.2%)
Subtotal Operating Related	\$0.54	1.0%
Total Program Expenditure Increase	\$3.54	6.5%
Water Consumption & Conservation: Fluctuation in water consumption has a direct impact on the revenues to the Water System. Water demand on a residential per capita basis as well as (Industrial, Commercial, Institutional) demand continues to fall and the resulting revenue trends will continue to be monitored and reflected in revenue forecasts and deferral of infrastructure capacity expansion plans.		1.5%
Total Rate Increase		8.0%

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Economic Conditions and Senior Government Stimulus Funding

This budget proposes the continuation of long term infrastructure renewal and replacement plans. Although some economic stability has been achieved and certain markets are improving uncertainty remains and regional unemployment rates continue to climb. To reduce capital spending in this climate would exacerbate the impacts on local employment levels.

Senior Government stimulus funding has been committed, with no allocation to the Water Service. Two projects (EW3544 Dundas Street Watermain Replacement and EW3545 Watermain Replacements) have been brought forward into 2010 in order to align with Transportation and Sewer works which were accelerated by the allocation of stimulus funding. These projects were not contemplated within the 20 year time frame of the Water Financial Plan. This acceleration without the benefit of senior government funding has put additional pressure on the Water Reserve Fund. The impact of these two projects is a significantly advanced need for approximately \$3 million from the Water Reserve Fund. Although a pressure on the Water Reserve Fund advancing these projects is of significant benefit in leveraging rate supported funds for General Tax and Wastewater and Treatment.

Water Consumption and Conservation

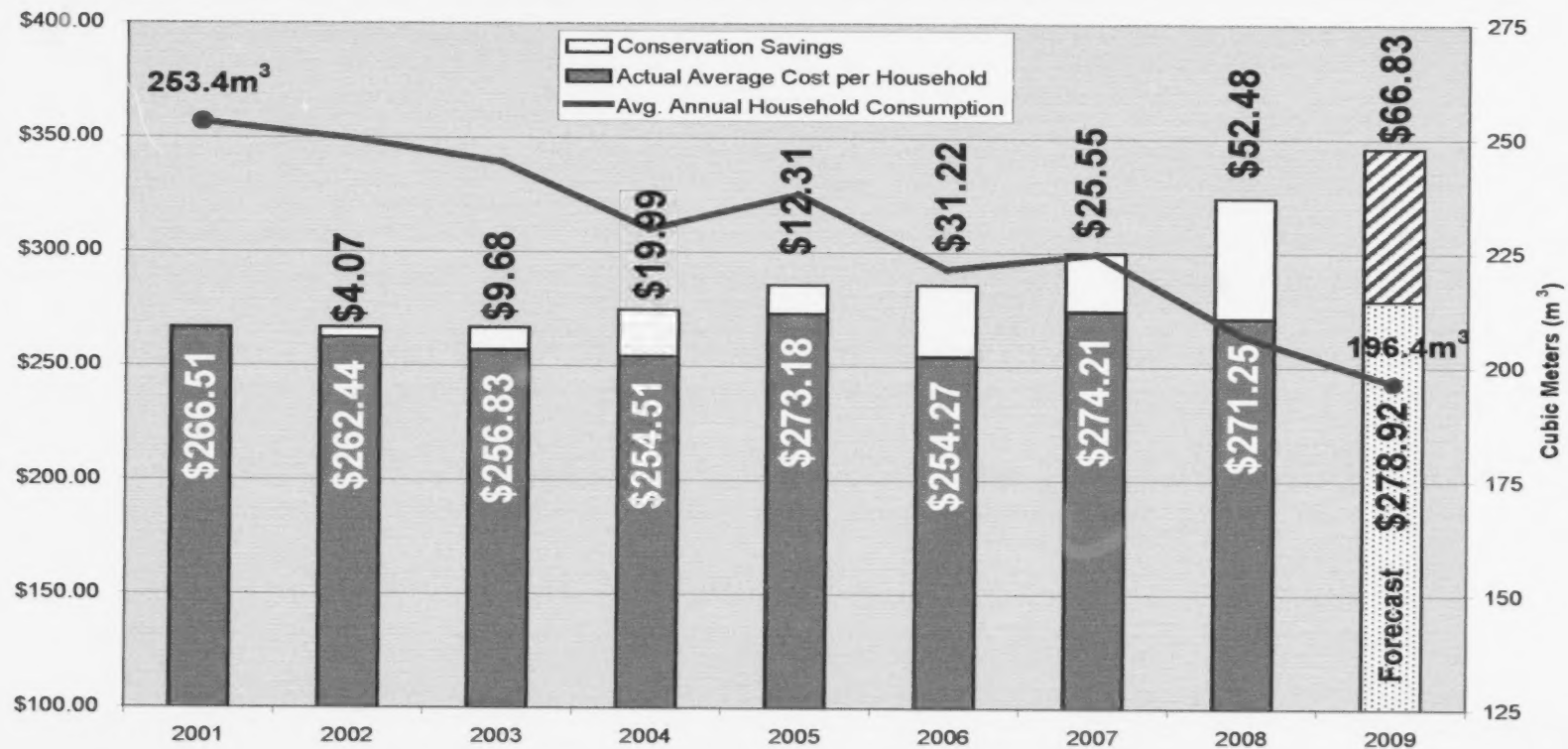
Average household usage in London has declined 18% from 2001 to 2008. The following graph illustrates that, for the average household, water costs have remained relatively constant and the customer can control their cost of service in spite of rising water rates.

There are a number of influencing factors responsible for this conservation trend and although the impact to departmental revenues is negative the overall impacts of water consumption decreases should be seen as a very positive trend toward *Conserving the Future*, and should be encouraged. The reduction in demand is evident at the Joint Board level as well, where significant capital expansion and associated costs such as the Elgin Treatment Plant expansion are being deferred from the original construction schedule. Deferral of plant expansions by 6 or 7 years which are valued in the \$50 million to \$100 million range saves millions of dollars per year, in interest on debt. This deferral of debt also makes more debt capacity available to other City projects.

It is anticipated that the final billed volume for 2009 will fall short of budget once again due to the relatively cool and wet summer and continued reduction in consumption by industrial, commercial and institutional customers due to economic pressures. The 2009 budget was based on volume of 47.4 million cubic metres (Mm³) which is being further reduced to 46.3 Mm³ for the proposed 2010 budget.

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Average Cost of Annual Water Bill
(per single family home)



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Other Initiatives

The Water Service continues to seek out and implement new technologies bringing innovative approaches to infrastructure renewal. Below are some of the new initiatives that have been included within the existing budget.

Leak Detection

Establishment of a leak detection monitoring system is beneficial in identification and repair of watermain leaks, quickly eliminating water loss before the watermain breaks, also eliminating the potential to cause greater and sometimes significant damage, especially in the downtown core. Benefits will include increased detection and reduction of non-revenue water along with increased reliability of infrastructure.

Trenchless Technologies

Trenchless technologies are currently under development within the Water Department. Compared to open cut and surface restoration construction, trenchless methods minimize the amount of excavation required to install watermain, minimize damage to surface structures, cause less disruption of traffic and other activities on and around job sites. This technology allows installations to be made in areas where excavation is impractical or impossible. Trenchless procedures are also more environmentally friendly because they produce less construction pollutants and noise. While trenchless watermain rehabilitation projects have been successfully completed for many years, Water Operations completed 5 watermain replacement projects in 2009 using directionally drilled processes.

Operational Technology Enhancements - Bar-coding of Water Meters

This enhancement will include a bar-coding system that will automate the tracking of meter inventory for the Water Operation's Meter Shop while working in the shop and the field, improving efficiency and accuracy. Benefits include better control of maintenance activities, improved tracking of meter repair and replacement and some cost savings.

Meter Replacement Strategy

Water Operations has developed a water meter replacement and meter reading strategy to be implemented concurrently with London Hydro's compliance with government legislation requiring implementation of "Smart Metering" for hydro customers. The smart metering initiative at London Hydro has been complemented with a new customer service software system (SAP) to manage the new meter read data. The new system has meter management capabilities and will be interlinked with meter replacement and the City's meter work order system.

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Reviews of the existing meters show that approximately 45,000 meters are beyond their optimum replacement age. These meters are in a deteriorating state of condition and a source of unaccounted water and revenue loss for both Water and Sewer revenue streams. The Smart Metering installation for hydro customers has been delayed and an interim water meter strategy has been deployed that calls for replacement meters compatible with the automated meter reading system. Reducing the backlog of old meters scheduled for replacement is currently underway through an aggressive meter change-out program. Temporary and full time staff have been deployed to reduce the backlog of meters to a sustainable level and minimize revenue losses associated with under-reading water meters.

Elgin Middlesex Pumping Station, Southeast Reservoir and Pumping Station Operations

A new operator will be required in 2010, prior to completion of Southeast Reservoir and Pumping Station, to enable training time to become familiar with the controls and operation of the waterworks complex, and to take over the contracted operation of London's pumps within the Elgin Middlesex Pumping Station. It is anticipated that this will result in better control of system pressures and reliability of the supply system. Costs currently paid to an outside contractor for the operation of Elgin Middlesex Pumping Station will offset personnel costs for the operator for both sites.

Financial Plans Regulation (O. Reg. 453/07 of the Safe Drinking Water Act)

The financial plan is required by the Ministry of the Environment by July 2010. The financial plan for the City's water supply system confirms our commitment to full cost recovery, eliminating the water infrastructure gap, while achieving sustainability of the system in the years to come. The financial plan identifies the funding requirements to ensure a safe and sufficient water supply, while meeting all regulatory compliance requirements. It is a commitment to continue renewing infrastructure as it approaches the end of its useful life, prior to failure, thereby minimizing maintenance and repair costs, social disruption and water loss and ensuring inter-generational equity.

A fully developed and implemented financial plan will maintain **London's Advantage** over other municipalities providing a high quality, abundant water supply at affordable rates and **securing tomorrow**, allowing future generations to prosper as we have.

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Capital Budget

The Water Service remains generally proactive in initiatives to ensure that this service continues to meet all of the demands and expectations of customers. Current infrastructure requires significant renewal and rehabilitation work to close the infrastructure gap ensuring that future generations are not faced with a water system that is collapsing and expensive to maintain. There is also an environmental duty, and soon will be a regulatory requirement, to ensure that water consumption is not wasteful. Further initiatives related to water awareness and the efficient use of water have been budgeted and programs are currently being designed.

The water utility has maintained a relatively good financial picture and continues to place London in the position of *Setting the Standard* for a utility which has an adequate and secure supply of high quality water. In the next few years, the water reserve funds are projected to be drawn down to a lower than normally acceptable level and some debt is projected.

2010 Water Capital Plan Summary		
Category of Project	Total (\$000's)	Percentage
Life Cycle Renewal	20,825	78%
Growth	3,166	12%
System Improvement	2,617	10%
Total	26,608	100%

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Water Distribution System Rehabilitation

Two capital projects are at the centre of rehabilitation and the efforts to close the infrastructure gap. Council has directed that these existing annual programs are to be increased by approximately \$500,000 per year for 20 years beginning in 2004.

1. The Watermain Cleaning & Relining Program targets areas of the City where water quality (taste, colour) has deteriorated due to prolonged water detention time and internal corrosion of the watermain (driven in part, by water quality complaints). Cleaning and relining restores water quality and improves fire flow, while extending the life of a watermain that would otherwise have to be replaced at a much higher cost and also reduces social impacts and disruption by utilizing trenchless technologies.
2. The Watermain Renewal Program ensures that the distribution system remains reliable and cost effective. This program is coordinated with sewers and roads.

Some anticipated outcomes of maintaining these programs are a reduction in water quality complaints, extended service life of watermain (before replacement is required), reduction in the number of watermain breaks, reduction in water losses and non-revenue water used for flushing, reduction in average age of system and a reduction in risk of private property damage.

Scope Change and Deferral of Major Works - Springbank Reservoir Cell No. 2

Springbank Reservoir Cell No. 2 reconstruction was the second largest project on Water's long term plan. Through a critical assessment of storage needs and an operational review of redundancy in the water system, as well as longer than expected life from the existing cover and liner resulting from changes in operational procedures, the existing reservoir can be maintained in a serviceable condition for several more years. Deferral of the project by 10 years results in significant debt deferral for the water utility. Additional inspection and repair costs may be incurred which can be accommodated in the current maintenance funding of the reservoir. Further investigative studies will be undertaken to assess the point in time when additional reservoir capacity is required following construction of the Southeast Reservoir and whether the current location is the most appropriate location for that additional capacity.

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Related Legislation

The "Licensing of Municipal Drinking Water Systems" (O. Reg. 188/07) requires 5 components:

1. A Drinking Water Works Permit (DWWP)
2. An Accepted Operational Plan
3. Accreditation of the Operating Authority
4. A Financial Plan
5. A Permit to Take Water (PTTW).

The requirement for a Drinking Water Quality Management System (DWQMS) and related implementation requirements are underway. The City of London's Operational Plan has been submitted and approved. The Drinking Water Works Permit application has been submitted and receipt is anticipated prior to the end of 2009. The external audit will be completed in the spring of 2010.

In August 2007 the Ministry of the Environment filed the Regulation and Guidelines for the *Safe Drinking Water Act, 2002* Financial Plans requirement (O. Regulation 453/07). A report was presented to ETC on November 24, 2008 outlining the requirements and the work done to date to achieve compliance and to ensure adequate funding of infrastructure renewal and replacement. The Financial Plan is required to be submitted to the MOE by July 2010. Preliminary financial modeling has indicated that the City's water system can achieve sustainability by 2015 (annual rate increases from that point on being similar to construction cost index for inflation) assuming water consumption stabilizes by 2011 and grows at a rate similar to population forecasts. As indicated in the prior report addressing the Water 20 Year Financial Plan, until 2015, rate increases at approximately 8% will be required.

The Ontario government passed the Clean Water Act (Bill 43) in October 2006 to protect the province's source waters which are used for municipal drinking water. In support of measures required by the legislation, the Ministry of the Environment (MOE) has established a grant program to fund work leading towards the development of Source Protection Plans by October 2012. While the City has benefited from the grant program, (report to ETC September 8, 2008), it is unclear at this time what the cost implications will be to Water and Wastewater Utilities when the plans are implemented.

The City of London has responded to the Environmental Bill of Rights Registry posting dealing with the proposal paper on Stewardship, Leadership, Accountability - Safeguarding and Sustaining Ontario's Water Resources for Future Generations. The main concern for London revolves around the point of whether London is undertaking a transfer of water across a Great Lake basin boundary. There is not adequate information in the proposal paper to allow Administration to accurately assess what parts of the new regulations may apply to London, what the timing of the impact will be, nor the magnitude of the impact.

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2011 Rate Increase

Utility budget approvals have generally been scheduled with the intent of having new user fee rates in place for January 1st billings. Approval and thereby effective dates of rate increases that occur later in the year reduce the annual revenues which negatively impacts operations and reserve fund balances.

As a result of the municipal election in 2010, budget deliberations will not take place until the early part of 2011. The Water Service has a long term financial plan which was approved by Council in November 2008. In order to continue with that plan, and consistent with the recommendations therein, it is recommended that Council consider an additional 8% rate increase to be effective on January 1, 2011 in advance of the budget deliberations. Water Service Operating and Capital Budgets would be considered concurrent with the General Tax Budget in early 2011 with the appropriate Council review and Public participation timelines. Delaying the rate increase will result in revenue loss possibly exceeding \$1 million in the early months of 2011 unless an effective rate higher than the 8% is implemented.

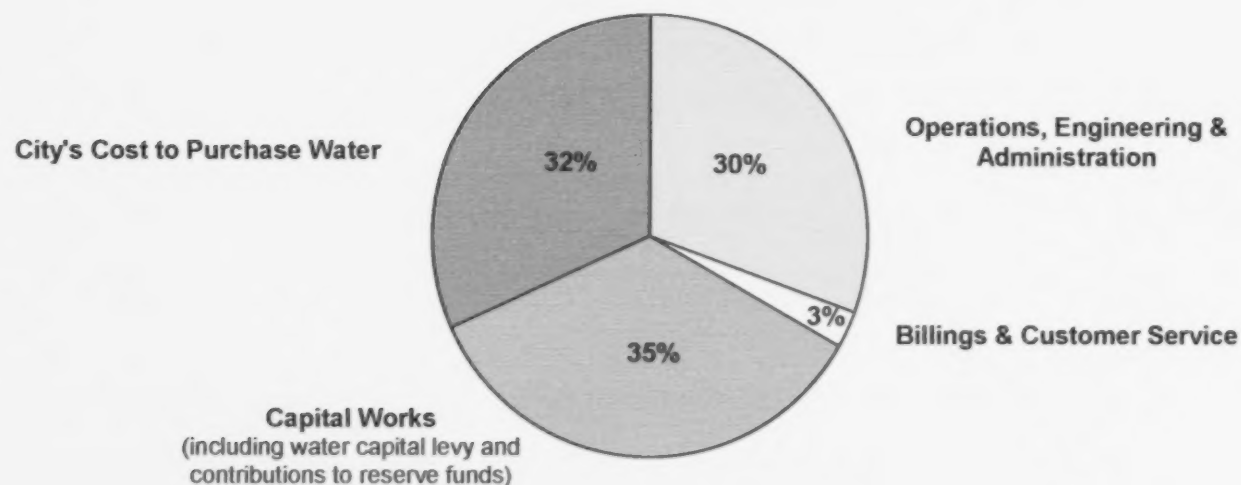
Conclusion

The 2010 budget proposes a rate increase of 8% with 1% related to operations, noting that if the purchase cost of water is removed "operational costs" have actually been reduced by just under 1%. The remaining balance of the rate increase is required to fund capital and off-set reduced revenue from water conservation. It should be recognized that a 1% change in the Water rate results in approximately a 25 cent monthly impact to the homeowner.

At a daily cost of 87 cents Londoners have access to a reliable, high quality abundance of water to satisfy all their water needs (drinking, food preparation, sanitation, showers, laundry, dishwashing, etc.). Public health, fire protection, economic development and convenience further enhance *London's Advantage* through the provision of this essential service.

**Environmental and Engineering Services Department
Your Water Dollar**

Where Your Water Dollar Goes



Impact on Average Residential Property

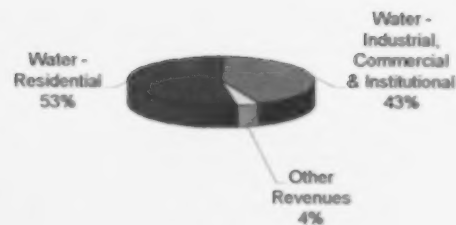
Annual Residential Cost at Existing Rates	\$293
Proposed 8% Rate Increase	\$24
Annual Residential Cost at Proposed Rates	\$317

Average annual residential usage has declined to 207 m³ in 2008.

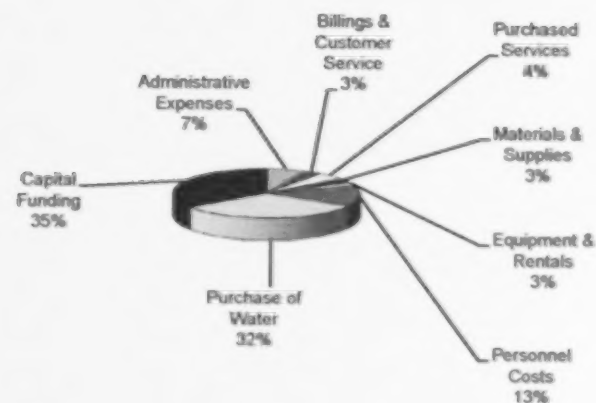
**Environmental and Engineering Services Department
Water
2010 Budget Highlights
(\$000's)**

	(\$000's)	%
2010 Proposed Budget at 8% Rate Increase	\$57,637	
2009 Approved Budget	54,097	
Increase Over 2009 Budget	\$3,540	6.5%
Revenue Adjustments Including Consumption Estimate Reduction		1.5%
Total Rate Increase		8.0%

**Revenue Budget
\$57,637**



**Expenditure Budget
\$57,637**



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Water
2010 Operating Program Budget Summary
(\$000's)

Program	2008 Actuals	2009 Approved Budget	2010 Proposed Budget	Change from 2009	Impact on Rate
Revenue					
Residential	(25,886)	(28,705)	(30,623)	(1,918)	3.5 %
Commercial, Institutional & Multi Family Residential	(21,654)	(23,258)	(24,828)	(1,570)	2.9 %
Other Revenues	(2,026)	(2,134)	(2,186)	(52)	0.1 %
Total Revenues	(49,566)	(54,097)	(57,637)	(3,540)	6.5 %
Engineering & Operations					
Engineering	1,127	1,345	1,341	(4)	(0.0)%
Purchase of Water	16,214	17,408	18,316	908	1.7 %
Water Operations Administration	0	998	1,031	33	0.1 %
Water Meters	1,276	1,387	1,266	(121)	(0.2)%
Pumping & Storage	2,517	2,538	2,797	259	0.5 %
Maintenance & Construction	6,569	7,729	7,521	(208)	(0.4)%
General Administration & Financial Expenses	3,764	3,867	3,678	(189)	(0.4)%
Billings & Customer Service	1,934	1,677	1,540	(137)	(0.3)%
Total Engineering & Operations	33,401	35,949	37,490	541	1.0 %
Capital Contributions					
Capital Funding					
➤ Current Year Life Cycle Capital Funding	7,551	8,867	10,075	1,208	2.2 %
➤ Reserve Fund Contribution	8,614	8,281	10,072	1,791	3.3 %
Total Capital Contribution	16,165	17,148	20,147	2,999	5.5 %
Total Expenditures	49,566	54,097	57,637	3,540	6.5 %

Environmental and Engineering Services Department
Water
2010 Object of Expenditure & Source of Revenue Summary
(\$000's)

Program	2008 Actuals	2009 Approved Budget	2010 Proposed Budget	Change from 2009	Impact on Rate
Residential	(25,886)	(28,705)	(30,623)	(1,918)	3.5 %
Commercial, Institutional, Industrial & Multi Family Residential	(21,654)	(23,258)	(24,828)	(1,570)	2.9 %
Other Revenues	(2,026)	(2,134)	(2,186)	(52)	0.1 %
Total Revenues	(49,566)	(54,097)	(57,637)	(3,540)	6.5 %
<i>Capital Funding</i>	16,165	17,148	20,147	2,999	5.5 %
<i>Other Financial Expenses</i>	173	165	165	0	0.0 %
Total Financial Expenses	16,338	17,313	20,312	2,999	5.5 %
<i>Billings & Customer Service</i>	1,934	1,677	1,540	(137)	(0.3)%
<i>Administrative Expenses</i>	2,755	4,014	3,891	(123)	(0.2)%
Total Administrative, Other & Recovered Expenses	4,689	5,691	5,431	(260)	(0.5)%
<i>Purchase of Water</i>	16,214	17,408	18,316	908	1.7 %
<i>Other Materials & Supplies</i>	1,539	1,755	1,702	(53)	(0.1)%
Total Materials & Supplies	17,753	19,163	20,018	855	1.6 %
Total Personnel Costs	6,704	7,640	7,685	45	0.1 %
Total Purchased Services	2,723	2,714	2,642	(72)	(0.1)%
Total Equipment & Rentals	1,359	1,576	1,549	(27)	(0.1)%
Total Expenditures	49,566	54,097	57,637	3,540	6.5 %

Environmental and Engineering Services Department
Water
Overview of Changes
(\$000's)

Explanation of Changes in Expenditures	Full Year Impact
Capital Related	
Increased contribution to Reserve Funds to support the long term financial plan and ensure sustainability of the infrastructure. Funds also required to align with Sewer and Roads works which received support from Federal and Provincial stimulus packages. It should be noted that although this funding continues to increase, the net impact of 2010 activities will decrease total reserve funds by approximately \$1 million.	1,791
Increased Capital Levy to continue the practice of pay-as-you-go financing for life cycle renewal projects.	1,208
Operating Related	
Increase in cost of water purchased from the Regional Water Boards due to 7% and 6% increase in rates from the Elgin Area and Lake Huron Primary Water Supply Systems respectively net of reduced consumption.	908
Wage, salary and benefit adjustments due to existing and anticipated employment agreements and inflationary increases in some overhead expenses are mitigated by reductions in energy and locate costs and increased use of vacancy management.	(117)
Partial transfer of Billing and Administration costs to Wastewater and Treatment to move gradually to full sharing of these costs.	(250)
Total Expenditures Increase of 6.5% - Rate Increase of 8%	3,540

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Overview of Changes
(\$000's)

<p style="text-align: center;">Increase in Water Rates 8% Explanation of Changes in Revenue</p>	<p style="text-align: center;">Full Year Impact</p>
<p>Maintaining Existing Services</p> <p>Increase in Water revenues due to 8% rate increase including a decrease in consumption estimates approximating 2.3%.</p> <p>Meter revenues and other user fees include an 8% rate increase and anticipated growth in the system.</p>	<p style="text-align: center;">(3,488)</p> <p style="text-align: center;">(52)</p>
<p>Total Revenue Increase at 8% Rate Increase</p>	<p style="text-align: center;">(3,540)</p>

Environmental and Engineering Services Department
Water
Four Year Operating Forecast
(\$000's)

Program	2010 Proposed Budget	2011 Budget Forecast	Incr. /(Decr.) Over 2010		2012 Budget Forecast	Incr. /(Decr.) Over 2011		2013 Budget Forecast	Incr. /(Decr.) Over 2012		2014 Budget Forecast	Incr. /(Decr.) Over 2013	
			\$	%		\$	%		\$	%		\$	%
Revenues													
Residential	(30,623)	(32,996)	(2,373)	7.7%	(35,553)	(2,557)	7.7%	(37,953)	(2,400)	6.8%	(40,136)	(2,183)	5.8%
Commercial, Institutional & Multi Family Residential	(24,828)	(26,752)	(1,924)	7.7%	(28,825)	(2,073)	7.7%	(30,771)	(1,946)	6.8%	(32,541)	(1,770)	5.8%
Other Revenues	(2,186)	(2,283)	(97)	4.4%	(2,387)	(104)	4.6%	(2,500)	(113)	4.7%	(2,621)	(121)	4.8%
Total Revenues	(57,637)	(62,031)	(4,394)	7.6%	(66,765)	(4,734)	7.6%	(71,224)	(4,459)	6.7%	(75,298)	(4,074)	5.7%
Administration & Capital Financing													
General Administration & Financial Expenses	3,678	3,743	65	1.8%	3,788	45	1.2%	3,856	68	1.8%	3,925	69	1.8%
Billings & Customer Service	1,540	1,566	26	1.7%	1,592	27	1.7%	1,619	27	1.7%	1,647	28	1.7%
Debt Servicing Costs	0	0	0		291	291		551	260	89.3%	540	(11)	-2.0%
Capital Funding	20,147	23,244	3,097	15.4%	26,395	3,151	13.6%	29,267	2,874	10.9%	31,971	2,704	9.2%
Total Administration & Capital Financing	25,365	28,553	3,188	12.6%	32,066	3,514	12.3%	35,293	3,229	10.1%	38,083	2,790	7.9%
Engineering													
Engineering	1,341	1,372	31	2.3%	1,404	32	2.3%	1,437	33	2.4%	1,470	33	2.3%
Purchase of Water	18,316	19,259	943	5.1%	20,212	953	4.9%	21,173	961	4.8%	22,178	1,005	4.7%
Total Engineering	19,657	20,631	974	5.0%	21,616	985	4.8%	22,610	993	4.6%	23,648	1,038	4.6%
Operations													
Water Meters	1,266	1,289	23	1.8%	1,313	23	1.8%	1,337	24	1.8%	1,361	24	1.8%
Pumping & Storage	2,797	2,846	49	1.8%	2,896	50	1.8%	2,946	50	1.7%	2,998	52	1.8%
Maintenance & Construction	7,521	7,656	135	1.8%	7,794	137	1.8%	7,933	139	1.8%	8,076	143	1.8%
Water Operations Administration	1,031	1,055	24	2.3%	1,080	25	2.4%	1,105	25	2.3%	1,132	27	2.4%
Total Operations	12,615	12,846	231	1.8%	13,083	235	1.8%	13,321	238	1.8%	13,567	246	1.8%
Total Expenditures	57,637	62,031	4,394	7.6%	66,765	4,734	7.6%	71,224	4,459	6.7%	75,298	4,074	5.7%

**Environmental and Engineering Services Department
Water
Staff Overview**

Service	2009 Revised Full Time Budgeted Staff	FTE	2010 Full Time Budgeted Staff	FTE	Full Time Staff Changes	FTE Changes	2011 Full Time Budgeted Staff	FTE	2012 Full Time Budgeted Staff	FTE	2013 Full Time Budgeted Staff	FTE	2014 Full Time Budgeted Staff	FTE
Engineering	12	12.05	12	12.02	0.00	(0.03)	12	12.02	12	12.02	12	12.02	12	12.02
Water Operations Administration (includes all 107 payroll to be costed as time is logged)	61	74.58	61	72.17	0	(2.41)	61	72.17	61	72.17	61	72.17	61	72.17
Water Meters	1	1.12	1	1.12	0	0.00	1	1.12	1	1.12	1	1.12	1	1.12
Pumping and Storage	1	1.00	2	2.00	1	1.00	2	2.00	2	2.00	2	2.00	2	2.00
Maintenance & Construction	3	3.37	3	3.37	0	0.00	3	3.37	3	3.37	3	3.37	3	3.37
Operations Subtotal	66	80.07	67	78.66	1	(1.41)	67	78.66	67	78.66	67	78.66	67	78.66
Total Staff	78	92.12	79	90.68	1	(1.44)	79	90.68	79	90.68	79	90.68	79	90.68

Environmental and Engineering Services Department
Water
Performance Indicators
(\$000's)

Service Outputs	2004	2005	2006	2007	2008
Average cost per residential account	\$254.51	\$273.18	\$254.27	\$274.21	\$271.25
Level of debt (\$ millions)	\$ -	\$ -	\$ -	\$ -	\$ -
Non-revenue water value* '04,'05 estimated	\$1,331,637	\$1,251,364	\$1,125,562	\$1,265,116	\$1,197,841
Lead services replaced (% of overall remaining)	0.34%	0.35%	0.52%	3.07%	7.64%
km of new watermains	34.9	37.0	41.8	26.8	19.8
km of watermains relined	10.3	9.2	6.3	8.7	4.5
Service Outcomes					
Water rate increase (effective rate)	3%	4%	5%	5%	8%
Water consumption (demand) change	(-3.4%)	1.6%	(-4.8%)	0.8%	(-6.7%)
Growth rate - % water accounts (meters) added	2.0%	1.8%	1.8%	1.7%	1.3%
Water quality complaints per 1,000 residents		2.65	2.94	1.90	1.37
Probability of being out of service for more than 2 hours		1 in 240	1 in 330	1 in 310	1 in 325
Breaks / km / year		0.115	0.089	0.124	0.079
Non-revenue Water (% of pumpage)	8.82%	8.13%	7.35%	7.73%	7.38%

Environmental and Engineering Services Department

Water

2010 Capital Budget

With Forecasts

Environmental and Engineering Services Department
Water
Capital Program
(\$000's)

Program Name:	Water	2010 Proposed Budget -	\$26,608
Committee:	Environment and Transportation Committee	2011 - 2014 Forecast -	\$121,790

Objective: The Water Capital program includes transmission and distribution piping, pumping stations, and reservoir storage to meet the growth demands of the city as well as repair and rehabilitation to extend the life cycle of existing infrastructure. The elements in this program are generally outlined in such engineering studies and documents as the Water Master Plan or the Water Distribution System Needs Analysis, or resulting from ongoing modeling and analysis of the existing system.

Page Number	Project Number	Project	Life Cycle Renewal	Growth	System Improvement
25	EW1612	Meters & Devices	400		
38	EW1627	Meter Replacement Program			1,800
25	EW3409	Pumping Stations Major Repairs	102		
25	EW3525	Cathodic Protection Program	50		
25	EW3526	Arva Pumping Station Upgrades	1,000		
25	EW3528	Engineer's Report	75		
38	EW3533	Lead Mitigation Strategy			106
26	EW3540	Elgin Middlesex Pumping Station - Capital Maintenance	50		
26	EW3544	Dundas Street Watermain Replacement	2,040		
26	EW3545	Watermain Replacements	1,019		
27	EW3563	Main Cleaning & Relining	2,501		
33	EW3628	Expansion of Southeast Pressure Zone		300	
34	EW3652	Wickerson High Level Watermain		307	
28	EW3656	Wellington Road Watermain Replacement	525		

Environmental and Engineering Services Department
Water
Capital Program
(\$000's)

Program Name: Water	2010 Proposed Budget -	\$26,608
Committee: Environment and Transportation Committee	2011 - 2014 Forecast -	\$121,790

Page Number	Project Number	Project	Life Cycle Renewal	Growth	System Improvement
35	EW3666	Wonderland Road North Feeder Watermain		2,259	
29	EW3710	Downtown Watermain Replacement	105		
37	EW3712	White Oak Road Watermain Upsizing		100	
29	EW3717	Inspect Trunk Concrete Pressure	845		
39	EW3754	Abandoned Wells Decommissioning			331
29	EW3765	Main Replacement - Engineering	7,938		
37	EW3772	Water Efficiency Program		200	
30	EW3787	Main Replacements with Major Road Works	2,625		
40	EW3817	Watermain Oversizing Costs			50
30	EW3833	Main Replacement Maintenance	800		
30	EW3842	Replace Lead Water Services	750		
40	EW3851	New Meters for Development			330
Total by Classification			\$20,825	\$3,166	\$2,617
Total 2010 Water Capital			\$26,608		

Environmental and Engineering Services Department
Water
Capital Expenditure Summary by Classification
(\$000's)

Water	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
Life Cycle Renewal	6,910	15,004	20,825	17,782	22,607	17,761	19,414	107,747	228,050
Growth	54,676	14,307	3,166	5,287	2,111	7,125	13,926	14,831	115,429
System Improvement	0	2,697	2,617	3,772	4,612	3,706	3,687	14,247	35,338
Total Water	61,586	32,008	26,608	26,841	29,330	28,592	37,027	136,825	378,817

Council approved the Capital Budget for 2009 on February 12, 2009 at \$31.8 million. Subsequently additional funds were approved.

Environmental and Engineering Services Department
Water
Capital Source of Financing Summary
(\$000's)

Water	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Totals
RATE SUPPORTED									
Capital Water Rates	1,785	8,867	10,075	11,400	12,575	13,715	14,900	90,200	163,517
Capital Water Reserve Fund	14,643	8,648	11,217	10,714	14,371	9,721	10,015	33,941	113,270
Industrial Oversizing Water Reserve Fund	8,679	2,387	112	508	1,076	431	3,377	2,986	19,556
Debenture			3,748						3,748
Total Rate Supported	25,107	19,902	25,152	22,622	28,022	23,867	28,292	127,127	300,091
NON-RATE SUPPORTED									
Debenture - Non Rate Supported (City Services - Water Reserve Fund)							5,000	2,000	7,000
City Services Water Reserve Fund ⁽¹⁾	10,992	589	1,442	3,408	497	3,938	3,711	6,185	30,762
City Services Corporate Services Reserve Fund	116		14	24	24	157	24	253	612
Other Contributions (Prov Grants, Cash Payments, Stimulus Funding)	171	434		787	787	630		1,260	4,069
Build Canada Fund	25,200	11,083							36,283
Total Non-Rate Supported	36,479	12,106	1,456	4,219	1,308	4,725	8,735	9,698	78,726
Total Sources of Financing	61,586	32,008	26,608	26,841	29,330	28,592	37,027	136,825	378,817

1) The funding allocation for growth projects included in 2009 are subject to be revised upon passage of the updated Development Charge Study. Growth splits for 2010 and beyond are consistent with the 2009 Development Charge Study.

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water

Category: Life Cycle

	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW1612 Meters & Devices		400	400	400	400	400	400	3,400	5,800
Purchase and installation of new water meters, valves and related equipment. To ensure fair billings based on actual water consumption.									
<u>2010 Financing:</u> Water Rates									
EW3409 Pumping Stations Major Repairs		102	102	102	102	102	102	510	1,122
Purchase and installation of major equipment to maintain or optimize the efficiency and effectiveness of the water control system.									
<u>2010 Financing:</u> Water Rates									
EW3525 Cathodic Protection Program	225		50				50	50	375
To implement, test and monitor Cathodic Protection on steel, concrete and ductile iron watermain to prolong the lifespan of existing watermain.									
<u>2010 Financing:</u> Water Rates									
EW3526 Arva Pumping Station Upgrades	1,950	50	1,000	50	50	50	50	250	3,450
To undertake major valve maintenance. Equipment is 40 years old and requires ongoing repairs.									
<u>2010 Financing:</u> Water Reserve Fund									
EW3528 Engineer's Report	75		75					75	225
Project required for an Engineer's Report on the City's Water Distribution and Well Supply System. Report is a legislated requirement under Reg. 170 of the "Safe Drinking Water Act", required once every five years.									
<u>2010 Financing:</u> Water Rates									

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water		Category: Life Cycle								
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total	
EW3540 EMPS - Capital Maintenance										
1,100 200 50 50 50 50 50 250 1,800										
Project required for maintenance and upgrades to Elgin Middlesex (London) Pumping Station at St. Thomas to accommodate operations in conjunction with the new Southeast Reservoir and Pumping Station. Upgrades include new pump and electrical Replacement of Pumps 4 & 5 and associated mechanical/electrical equipment.										
<u>2010 Financing:</u> Water Rates										
EW3541 EMPS - SCADA Upgrade										
300 300 300 900										
To repair and upgrade equipment controllers and computerized SCADA system at Elgin Middlesex Pumping Station. Balance of construction scheduled for 2012.										
EW3544 Dundas Street Watermain Replacement										
2,040 2,040										
Watermain replacement on Dundas between Clark Road and Crumlin Road in conjunction with the Transportation Dundas Street Gateway stimulus project.										
<u>2010 Financing:</u> Debenture										
EW3545 Watermain Replacements										
1,019 1,019										
Watermain replacements on various streets coordinated with Wastewater Stimulus Funding.										
<u>2010 Financing:</u>										
Debenture	\$500									
Water Reserve Fund	519									
Total Financing	\$1,019									

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water		Category: Life Cycle							
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW3563 Main Cleaning & Relining		2,182	2,501	2,701	2,901	3,101	3,301	19,505	36,192
An annual program for the cleaning and relining of existing watermains on streets throughout the City of London in order to maintain flow capacity and provide safe, cost effective water.									
<u>2010 Financing: Water Rates</u>									
EW3617 Springbank Reservoir No. 2 Replacement		450		485	3,150				4,085
Springbank Reservoir Cell No. 2 reconstruction is the second largest project on Water's Long Term Plan. An assessment of storage needs and changes to the operational procedures have increased the anticipated service life. Deferral of the project by 10 years is expected and results in significant debt deferral for the water utility. Interim inspection and repair costs can be accommodated within the current maintenance funding of the reservoir. Further studies will be undertaken to assess the timing and location for additional reservoir capacity following construction of the Southeast Reservoir.									
EW3624 Burbrook Area Watermain Upgrades Phase II							882	4,548	5,430
Replacement of watermain and water service in the existing Burbrook Trunk Storm Sewer and Burbrook Lateral area. New watermain required to replace undersized existing system which has surpassed its useful life. Coordinated with Sewer Project ES3054 and ES3058.									
EW3627 SCADA Equipment Replacement		75			90			225	390
The planned replacement of existing SCADA equipment.									

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water		Category: Life Cycle							
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW3656 Wellington Road Watermain Replacement			525		441	882	998	1,008	3,854
To replace the watermain on Wellington Road from the Thames River to Baseline Road. New watermain required to replace existing system which has surpassed its useful life. Coordinated with Sewer Project ES2461 - Separation and CSO Program.									
2010 Financing: Water Reserve Fund									
EW3672 Commissioners Road Watermain Replacement	2,600				735				3,335
To replace the watermain on Commissioners Road from Wharncliffe Road to Wonderland Road. New watermain required to replace existing system which has surpassed its useful life.									
EW3702 Fanshawe Park Road Watermain Replacement								1,842	1,842
To replace the watermain on Fanshawe Park Road from Adelaide Street to Highbury Avenue. Coordinated with Transportation Project TS1475 and Sewer Project ES4424. Construction scheduled in 2015.									
EW3707 Southdale Road Watermain Replacement								1,909	1,909
The replacement and rehabilitation of existing watermain on Southdale Road between Wellington Road and Pond Mills in conjunction with Transportation Road Project TS1487 Road Widening and Sewer Project LI2040. Construction tentatively scheduled for 2019.									

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water		Category: Life Cycle							
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW3710 Downtown Watermain Replacement			105	945			105	1,995	3,150
To replace deficient watermain and services. Useful life of watermain and water services surpassed or undersized. Coordinated with Roads Project TS1306 and Sewer Replacement Program.									
2010 Financing: Water Reserve Fund									
EW3713 Sarnia Road Watermain Replacement				137	1,229				1,366
To replace the watermain on Sarnia Road from Wonderland Road to Sleightholme Avenue. New watermain required to replace existing system which has surpassed its useful life. Coordinated with Transportation Project TS1484. Construction scheduled in 2012.									
EW3717 Inspect Trunk Concrete Pressure		475	845	499	446	163	163	815	3,406
Project required for structural analysis of existing 900mm to 1,350mm concrete watermain.									
2010 Financing: Water Rates									
EW3765 Main Replacement - Engineering		7,260	7,938	8,238	8,538	8,838	9,138	50,190	100,140
An annual program for replacement of watermain and water services as outlined in the Condition Assessment Program Needs Study. New watermain and water services required to replace existing systems which have surpassed useful life. New water supply required to provide fire flows to the community. Coordinated with Sewer Project ES2414 - Sanitary Sewer Replacements.									
2010 Financing:									
Water Rates									\$2,627
Water Reserve Fund									5,311
Total Financing									\$7,938

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water		Category: Life Cycle							
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW3787 Main Replacements with Major Road Works		2,500	2,625	2,625	2,625	2,625	2,625	13,125	28,750
Replacement of watermain that have reached their useful lifespan. Coordinated with major road works.									
<u>2010 Financing: Water Rates</u>									
EW3833 Main Replacement Maintenance		800	800	800	800	800	800	4,000	8,800
Maintenance of existing watermain and service replacements as identified by the Needs Study. Useful life of watermain may have expired, be undersized and/or inadequate to supply fire flow to present standards.									
<u>2010 Financing: Water Rates</u>									
EW3842 Replace Lead Water Services		750	750	750	750	750	750	3,750	8,250
Fifteen year program to replace lead water services. Recommendation from the Walkerton Inquiry Report states "lead service lines should be located and replaced over time with safer materials". This work has been incorporated into our Lead Service Replacement Program.									
<u>2010 Financing: Water Reserve Fund</u>									
Balance of approved projects for prior years comparison	660	(240)							420
Total Life Cycle Renewal	6,910	15,004	20,825	17,782	22,607	17,761	19,414	107,747	228,050

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water		Category: Growth							
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW3312 Water Distribution System Master Plan	155					155		155	465
To update the City's Water Distribution System Master Plan to support the calculation of Development Charges. Growth splits are consistent with the 2009 Development Charge Study. 100% Growth Related (85.6% DC Rate Supported).									
EW3590 Uplands Pumping Station Upgrade							28	252	280
To upgrade the Uplands Pumping Station to serve future growth in North London. Growth splits are consistent with the 2009 Development Charge Study. 100% Growth Related (100% DC Rate Supported).									
EW3591 Hyde Park Pumping Station Upgrade							55	495	550
To upgrade the Hyde Park Pumping Station to serve future growth in North West London. Growth splits are consistent with the 2009 Development Charge Study. 100% Growth Related (100% DC Rate Supported).									
EW3595 Hyde Park Road Feeder Watermain						227	2,045		2,272
To construct a 750mm watermain on Hyde Park Road from Sarnia Road to Oxford Street. Watermain installation required for water supply to West London. Coordinated with Sewer Project ES2494 and Transportation Project TS1477. Pumping Station to serve future growth in North London. Growth splits are consistent with the 2009 Development Charge Study. 33% Growth Related (33.8% DC Rate Supported).									

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water		Category: Growth							
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW3606 Southeast Pressure Zone Feeder Watermain	3,549	2,817		136	1,221		189	1,401	9,313
<p>To construct feeder watermain on Bradley Avenue from Jackson Road to Airport Road to service Airport Road Industrial Subdivision Development Phase II in 2009 and Southeast London from the Southeast Pumping Station and Reservoir. Coordinated with Industrial Land Project ID1168 and Sewer Oversizing Project ID2058. Incremental growth in the water distribution system will ultimately lead to increased operating costs. Growth splits are consistent with the 2009 Development Charge Study. 100% Growth Related (16% DC Rate Supported). Future Phase in 2015.</p>									
EW3611 Highbury Avenue South Trunk Watermain						531	4,783		5,314
<p>Construction of a 900mm diameter trunk watermain on Highbury Avenue from the Southeast Pumping Station to Dingman Drive to facilitate industrial growth in Southeast London. Growth splits are consistent with the 2009 Development Charge Study. 100% Growth Related (36.9% DC Rate Supported). Construction scheduled for 2014.</p>									

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water		Category: Growth							
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW3614 Southeast Pumping Station - Reservoir	45,528	10,200							55,728
Construction of a 113 million litre (25 million gallon) reservoir and pumping station on Highbury Avenue for storage and balancing of water supply from the Elgin Area Primary Water Supply System. Construction is planned to be completed in 2011. Project consists of pumping station (84% Growth Related) and Reservoir (44% Growth) (13.8% DC Rate Supported). Build Canada funding through the HELP Clean Water initiative will support 2/3 of the cost of this project. Growth splits are consistent with the 2009 Development Charge Study.									
EW3628 Expansion of Southeast Pressure Zone		100	300	300				2,000	2,700
To install pressure regulating valves and associated piping to service portions of Southeast London with the Southeast Pumping Station. Growth splits are consistent with the 2009 Development Charge Study. 40% Growth Related (25.3% DC Rate Supported).									
2010 Financing:									
Water Reserve Fund	\$186								
Industrial Oversizing Reserve Fund	38								
Development Charges	76								
Total Financing	\$300								

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water		Category: Growth							
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW3651 Hyde Park - Samia Road High Level Watermain	3,402						218	1,959	5,579
Construction of 400mm, 450mm and 600mm watermain in the high level area of Northwest London. Watermain installation required to service customers in the Hyde Park high level area. Growth splits are consistent with the 2009 Development Charge Study. 100% Growth Related (85.5% DC Rate Supported).									
EW3652 Wickerson High Level Watermain	1,170	307	307	2,454				1,172	5,410
Construction of 400mm and 450mm watermain in the high level area of Southwest London. Watermain installation required to service future customers in the River Bend and Wickerson area. Coordinated with Transportation Project TS1408. Growth splits are consistent with the 2009 Development Charge Study. 100% Growth Related (100% DC Rate Supported).									
2010 Financing: Development Charges									
EW3653 Wickerson Pumping Station	357	83		747					1,187
Upgrade pumping station to serve future growth in Southwest London. Pumping station required for the high level River Bend and Wickerson area. Growth splits are consistent with the 2004 and 2009 Development Charge Study. 100% Growth Related (86.8% DC Rate Supported). Construction scheduled in 2011.									

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water								Category: Growth		
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total	
EW3654 Arva Pumping Station Upgrade								260	260	
Upgrade the Arva Pumping Station including pump replacements that are required as water demand increases. Growth splits are consistent with the 2009 Development Charge Study. 50% Growth Related (47.2% DC Rate Supported).										
EW3666 Wonderland Road North Feeder Watermain									5,302	
			2,259		304	2,739				
To construct a 450mm watermain on Wonderland Road North from Gainsborough Road to Sunningdale Road. Project required to upgrade north London area water supply. 2010 Phase is from Gainsborough Road to Aldersbrook Road. Coordinated with Transportation Project TS1156 and TS1354 - Road Widening and Sewer Project ES4423. Growth splits are consistent with the 2009 Development Charge Study. 46% Growth Related (44.1% DC Rate Supported).										
2010 Financing:										
Debenture										
Development Charges										
Total Financing										

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water								Category: Growth	
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW3685 Oxford Street West Feeder Watermain					236	2,126			2,362
To construct a 600mm watermain on Oxford Street West from Hyde Park Road to Sanatorium Road. Watermain installation required to supply water to new developments in west London in conjunction with Transportation Project TS1493, Sanitary Sewer Project ES2493 and Storm Sewer Project ES4421. Growth splits are consistent with the 2009 Development Charge Study. 75% Growth Related (72.5% DC Rate Supported).									
EW3692 Medway - Wonderland Road Trunk Watermains						997	6,258	2,717	9,972
To construct a 1,500mm watermain from the Arva Pumping Station to the North London area. Trunk watermain required to supply future customers in North and West London. Growth splits are consistent with the 2009 Development Charge Study. 100% Growth Related (94.6% DC Rate Supported). Construction scheduled for 2014 and 2015.									
EW3709 Crumlin & River Feeder Watermain Phase III								2,670	2,670
To construct 450mm and 600mm watermains in South East London to service industrial land in the River Road Industrial area. Growth splits are consistent with the 2009 Development Charge Study. 77% Growth Related (33.1% DC Rate Supported). Construction scheduled for 2019.									

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water				Category: Growth					
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW3712 White Oak Road Watermain Upsizing			100	1,300					1,400
To construct a new 450mm watermain on White Oak Road between Dingman Drive and Exeter Road to service new development within the 20 year Urban Growth Area. Growth splits are consistent with the 2009 Development Charge Study. 35% Growth Related (8.5% DC Rate Supported).									
2010 Financing:									
Water Reserve Fund	\$68								
Industrial Oversizing Reserve Fund	24								
Development Charges	8								
Total Financing	\$100								
EW3772 Water Efficiency Program		100	200	350	350	350	350	1,750	3,450
To undertake a water efficiency strategy to promote awareness of water issues. Water efficiency/conservation program will be a requirement of the new Municipal Water Licensing Plan. Growth splits are consistent with the 2009 Development Charge Study. 8% Growth Related (6.9% DC Rate Supported).									
2010 Financing:									
Water Reserve Fund	\$186								
Development Charges	14								
Total Financing	\$200								
Balance of approved projects for prior years comparison	515	700							1,215
Total Growth	54,676	14,307	3,166	5,287	2,111	7,125	13,926	14,831	115,429

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water		Category: System Improvement							
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW1627 Meter Replacement Program		1,800	1,800	1,800	1,800	1,800	1,800	7,200	18,000
<p>Ten year program (estimated) to upgrade water meter and meter reading technology in light of changes being made by current meter reading/billing partner (London Hydro). Funding program identified in this budget is based on transition to Automated Meter Reading system (AMR) for over 100,000 meters. (Program will also address backlog of out of date meters previously budgeted in EW1622 Meter Replacement Program - now deleted). If business case supports Automated Meter Reading System, current meter reading costs could be reduced over time.</p> <p><u>2010 Financing:</u> Water Reserve Fund</p>									
EW2403 New Vehicles & Equipment		130				130		130	390
<p>To purchase new vehicles to provide for planned growth of the water distribution system.</p>									
EW3533 Lead Mitigation Strategy		106	106	106	106	106	106	530	1,166
<p>An annual program to support the replacement of lead water services through increased public awareness of the Water By-law W-3. Recommendations from the Walkerton Inquiry states "lead service lines should be located and replaced over time with safer materials".</p> <p><u>2010 Financing:</u> Water Reserve Fund</p>									
EW3543 Southdale West Main Replacement				105	945				1,050
<p>New project to replace/upsized the distribution watermain on Southdale Road between Wonderland Road and Wharmcliffe Road. New watermain required to replace existing system which has surpassed its useful life and is undersized for the current flow requirement.</p>									

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water				Category: System Improvement							
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total		
EW3657 Westmount Area High Level System Distribution Improvements									2,145	2,145	
To replace and upsize the existing 300mm and 200mm watermains on Viscount Road (Wonderland Road to Belmont Drive) with 600mm and 450mm watermains. Watermains undersized for peak distribution needs. Identified in the High Level Water Distribution System Master Plan.											
EW3658 Westmount Pumping Station to Viscount Road High Level Water Replacement									119	1,070	1,189
To replace and upsize the existing 300mm and 400mm watermains on Wonderland Road (Westmount Pumping Station to Viscount Road) with 600mm watermain as identified in the High Level Water Distribution System Master Plan. Watermains undersized for peak distribution. Construction scheduled for 2014.											
EW3743 Watermain Extensions									840	1,680	2,520
Cost sharing project for the watermain extensions to unserved parts of the Urban Growth Area and beyond. City's share is approximately 25% of the total cost.											
EW3754 Abandoned Wells Decommissioning		331	331	331	331	331	331	662	2,648		
To decommission former London Public Utilities Commission abandoned wells. Ontario Regulation 903,Section 21 (3) requires that the wells be properly decommissioned.											
2010 Financing: Water Reserve Fund											

Environmental and Engineering Services Department
Water
Capital Expenditure Detail
(\$000's)

Program Name: Water		Category: System Improvement							
	Prior Years	2009	2010	2011	2012	2013	2014	2015 to 2019	Total
EW3805 Local Improvement - White Oak Road Industrial Subdivision Water Cost Sharing				1,050	1,050				2,100
Cost sharing project for the installation of watermain in this existing industrial area. Coordinated with Sewer Project ES3111. City's share is approximately 25% of the total cost.									
EW3817 Watermain Oversizing Costs			50	50	50	50	50	250	500
To accommodate oversizing costs to upsize feeder and distribution watermain.									
<u>2010 Financing:</u> Industrial Oversizing Reserve Fund									
EW3851 New Meters for Development		330	330	330	330	330	330	1,650	3,630
An annual program to purchase and install new water meters, valves and related equipment for new development. To ensure fair billings on actual water consumption for all new development connecting to the water distribution system.									
<u>2010 Financing:</u> Water Reserve Fund									
Total System Improvement	0	2,697	2,617	3,772	4,612	3,706	3,687	14,247	35,338
Total Capital Plan	61,586	32,008	26,608	26,841	29,330	28,592	37,027	136,825	378,817

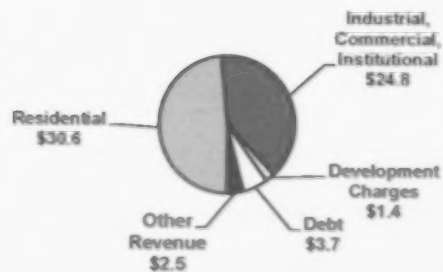
Environmental and Engineering Services Department

Water

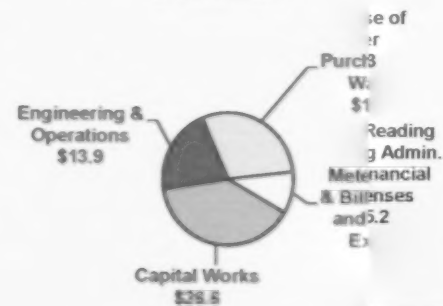
2010 Reserve Funds & Reserves

Environmental and Engineering Services Department Water Simplified Water Funding Overview (\$millions)

**Cash In
Revenues (Rates, DC, Interest)
\$63.0 Million**



**Cash Out
Spending (Capital and Operating)
\$64.0 Million**



Reserves /Reserve Funds Balances



Cash In \$63 M	—	Cash Out \$64 M	=	Change in Reserve Funds (\$1 M)
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Environmental and Engineering Services Department
Water
Reserve Funds & Reserves
(\$000's)

New Capital Water Reserve Fund	Actual 2008	Projected 2009	Proposed 2010	Forecast				
				2011	2012	2013	2014	2015-2019
Opening Balance	\$28,390	\$28,286	\$6,904	\$4,959	\$4,855	\$2,795	\$6,693	\$9,751
Contributions from Operating Water Rates	6,281	6,797	9,079	10,447	12,180	13,461	12,812	35,265
Additional Contribution	525	0	0	0	0	0	0	0
Interest	1,012	529	193	163	131	158	261	2,102
	\$36,208	\$35,612	\$16,176	\$15,569	\$17,166	\$16,414	\$19,766	\$47,118
Operating Deficit ⁽²⁾		600	0	0	0	0	0	0
Drawdowns - Current Year	5,487	8,648	11,217	10,714	14,371	9,721	10,015	33,941
Drawdowns - Prior Year	2,435	19,460	0	0	0	0	0	0
Total Drawdowns ⁽¹⁾	\$7,922	\$28,708	\$11,217	\$10,714	\$14,371	\$9,721	\$10,015	\$33,941
Ending Balance ⁽³⁾	\$28,286	\$6,904	\$4,959	\$4,855	\$2,795	\$6,693	\$9,751	\$13,177

Notes:

- (1) Drawdowns are based on full capital needs and not intended to project the actual cash flow of funds being utilized in a particular year.
(2) The 2nd Quarter Monitoring Report reported a potential \$0.6 million deficit in Water Services.
(3) The reserve fund balance may increase/decrease subject to the 2009 year end operating position of the water operating budget.

Industrial Oversizing Water Reserve Fund ⁽²⁾	Actual 2008	Projected 2009	Proposed 2010	Forecast				
				2011	2012	2013	2014	2015-2019
Opening Balance	\$11,040	\$12,218	\$3,413	\$4,214	\$4,637	\$4,496	\$5,005	\$2,539
Contributions from Operating Water Rates	1,300	1,300	800	800	800	800	800	2,800
Interest	420	231	113	131	135	140	111	389
	\$12,760	\$13,749	\$4,326	\$5,145	\$5,572	\$5,436	\$5,916	\$5,728
Drawdowns - Current Year	32	2,387	112	508	1,076	431	3,377	2,986
Drawdowns - Prior Year	510	7,949	0	0	0	0	0	0
Total Drawdowns ⁽¹⁾	\$542	\$10,336	\$112	\$508	\$1,076	\$431	\$3,377	\$2,986
Ending Balance	\$12,218	\$3,413	\$4,214	\$4,637	\$4,496	\$5,005	\$2,539	\$2,742

Notes:

- (1) Drawdowns are based on full capital needs and not intended to project the actual cash flow of funds being utilized in a particular year.
(2) This reserve fund was established to provide funding for the servicing costs in industrial developments and oversizing in growth projects.

Environmental and Engineering Services Department
Water
Reserve Funds & Reserves
(\$000's)

City Services - Water Levies Reserve Fund	Actual 2008	Projected 2009	Proposed 2010	Forecast				
				2011	2012	2013	2014	2015-2019
Opening Balance	\$10,972	\$13,921	\$6,712	\$6,658	\$4,802	\$6,140	\$4,329	\$2,694
Levies	2,987	1,384	1,190	1,383	1,673	1,972	1,972	9,860
Interest	427	305	198	169	162	155	104	505
	\$14,386	\$15,610	\$8,100	\$8,210	\$6,637	\$8,267	\$6,405	\$13,059
Refunds	100	6	0	0	0	0	0	0
Forecasted Future Debt	0	0	0	0	0	0	0	1,770
Drawdowns - Current Year	53	589	1,442	3,408	497	3,938	3,711	6,185
Drawdowns - Prior Year	312	8,303	0	0	0	0	0	0
Total Drawdowns ⁽¹⁾	\$465	\$8,898	\$1,442	\$3,408	\$497	\$3,938	\$3,711	\$7,955
Ending Balance	\$13,921	\$6,712	\$6,658	\$4,802	\$6,140	\$4,329	\$2,694	\$5,104

Notes: (1) Drawdowns are based on full capital needs and not intended to project the actual cash flow of funds being utilized in a particular year.

Lead Service Extension Replacement Reserve Fund ⁽¹⁾	Actual 2008	Projected 2009	Proposed 2010	Forecast				
				2011	2012	2013	2014	2015-2019
Opening Balance	\$1	\$490	\$482	\$477	\$500	\$524	\$549	\$575
Contributions from Operating Water Rates	500	0	0	0	0	0	0	0
Repayment of Lead Replacement Program	2	3	6	9	9	9	9	42
Interest	3	14	14	14	15	16	17	95
	\$506	\$507	\$502	\$500	\$524	\$549	\$575	\$712
Loans-Lead Replacement Program	16	25	25	0	0	0	0	0
Total Loans	\$16	\$25	\$25	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$490	\$482	\$477	\$500	\$524	\$549	\$575	\$712

Note: (1) The purpose of this reserve fund is to provide the funding mechanism for the Lead Service Extension Replacement Loan Program designed to assist homeowners with the private portion of lead service replacements. Repayment will be made over 10 years. The annual funding requirement is dependant on the number of homeowners who take advantage of this pilot project. Any balance remaining in this reserve fund at the end of Lead Service Extension Replacement Loan Program will be returned to the New Capital Water Reserve Fund.

Water Vacancy Management Reserve	Actual 2008	Projected 2009	Proposed 2010	Forecast				
				2011	2012	2013	2014	2015-2019
Opening Balance	\$109	\$121	\$181	\$181	\$181	\$181	\$181	\$181
Contributions	12	60	0	0	0	0	0	0
	\$121	\$181	\$181	\$181	\$181	\$181	\$181	\$181
Drawdowns	0	0	0	0	0	0	0	0
Total Drawdowns	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$121	\$181	\$181	\$181	\$181	\$181	\$181	\$181

Notes:

(1) This reserve is funded by vacancy management savings to be used to mitigate deficits and/or stabilize rates in future years for Wastewater & Treatment Services.

Environmental and Engineering Services Department

Water

2010 Debt Summary - Rate Supported

Environmental and Engineering Services Department
Water
Debt Summary - Rate Supported
(\$ millions)

The Water budget capital forecast includes debt financing of \$3.7 million as part of the 2010-2019 capital plan forecast as outlined in the table below.

Rate Supported - Projected Debt Financing	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Capital Projects Funded by Rate - Supported Debentures ⁽¹⁾	3.7									

(1) Debt servicing cost will be covered by operating revenue generated by Water rates.

The Water system has been maintained using pay-as-you-go capital financing. Currently, the total authorized not issued debt is \$0.5 million. The long term financial goal is to continue to fund water system capital works using pay-as-you-go sources as the primary source of funding. Debt financing will, however, be considered a viable option to fund large projects such as the Springbank Reservoir that will yield a long term benefit.

By 2013 the annual debt servicing costs will be approximately \$0.6 million as outlined in the table below.

Annual Debt Servicing Costs (excluding Joint Boards)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Water Budget - Rate Supported			0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6

To date the only debt the water budget carries is that associated with the City's share of debt issued by the Joint Boards (debt issued for capital works necessary to bring potable water from Lake Huron and Lake Erie to the City system). This will be approximately \$3.1 million at the end of 2009. Debt payments tied to the City's share of the Joint Board debt are made indirectly as the part of the purchase of water rate charged to the City by the Joint Boards and is estimated to be approximately \$0.9 million in 2010.

Environmental and Engineering Services Department

Water

2010 Schedule of Rates and Charges

Environmental and Engineering Services Department
Water
2010 Schedule of Rates and Charges

Effective Dates

Monthly Rates and Charges

January 1, 2010 for all water used on or after that date with the water used prior to that date billed at existing rates and estimated by proration based on meter reading dates.

Equipment Rentals

January 1, 2010 for all rentals applicable on or after that date with rentals prior to that date billed at existing rental charges.

Miscellaneous Charges

January 1, 2010 for all charges incurred on or after that date.

Monthly Rates and Charges

Residential

	<u>2009 Approved Rates</u>	<u>2010 Proposed Rates</u>
First 16.990 m ³	\$1.38455/m ³	\$1.49531/m ³
Next 39.644 m ³	\$1.45538/m ³	\$1.57181/m ³
All additional m ³	\$1.52513/m ³	\$1.64714/m ³
Minimum monthly bill	\$5.00	\$5.00

**Commercial, Institutional, Industrial &
Multi Family Residential**

	<u>2009 Approved Rates</u>	<u>2010 Proposed Rates</u>
First 2.832 m ³	\$5.30156/m ³	\$5.72568/m ³
Next 707.925 m ³	\$0.90775/m ³	\$0.98037/m ³
All additional m ³	\$0.74969/m ³	\$0.80967/m ³
Minimum monthly bill	\$5.00	\$5.00

Environmental and Engineering Services Department
Water
2010 Schedule of Rates and Charges (cont'd)

	<u>2009 Approved Rates</u>	<u>2010 Proposed Rates</u>
<u>Water Meters</u>		
Meter Size	Monthly Charge	Monthly Charge
16 mm	\$0.55	\$0.59
19 mm	\$0.60	\$0.65
25 mm	\$4.78	\$5.16
40 mm	\$9.32	\$10.07
50 mm	\$12.50	\$13.50
76 mm	\$31.18	\$33.67
100 mm	\$45.91	\$49.58
150 mm	\$77.51	\$83.71
200 mm	\$119.62	\$129.19
<u>Miscellaneous Charges</u>		
Non-payment of account		
Late payment charge	Monthly Interest Compounded	Monthly Interest Compounded
NSF cheques	\$11.82 + bank charges	\$12.77 + bank charges
Collection charge	\$12.28 per trip	\$13.26 per trip
Reconnection		
During regular hours	\$25.25	\$27.27
After regular hours	\$39.82	\$43.01

Environmental and Engineering Services Department
Water
2010 Schedule of Rates and Charges (cont'd)

	<u>2009 Approved Rates</u>	<u>2010 Proposed Rates</u>
Arrears certificate charges (non-payment/arrears)	\$50.00 per property	\$50.00 per property
Disconnect and Reconnect meter at customer request		
Up to 25mm	\$50.76	\$54.82
Over 25mm	\$86.41	\$93.32
Install remote water meter register		
Wiring done by Water Meter Shop	\$154.55	\$166.91
Wiring done by contractor	\$30.91	\$33.38
Repair damaged meter		
16 and 19 mm	\$133.67	\$144.36
25 mm and larger	Time and material	Time and material
Meter checked for accuracy at customer's request and found to be accurate		
Up to 25mm	\$99.91	\$107.90
Over 25mm	\$135.01	\$145.81

Environmental and Engineering Services Department
Water
2010 Schedule of Rates and Charges (cont'd)

	<u>2009 Approved Rates</u>	<u>2010 Proposed Rates</u>
Water Rate for Temporary Connection for Construction		
Single family structure	\$11.13	\$12.02
Duplex structure one service line	\$11.13	\$12.02
Up to four units	\$13.91	\$15.02
5 to 10 units	\$20.85	\$22.52
11 to 15 units	\$27.81	\$30.03
16 to 20 units	\$34.77	\$37.55
21 to 25 units	\$41.85	\$45.20
26 to 30 units	\$48.66	\$52.55
31 to 35 units	\$55.63	\$60.08
36 to 40 units	\$62.58	\$67.59
41 to 50 units	\$69.53	\$75.09
Over 50 units	\$1.41 per unit	\$1.52 per unit
Other structures per 93 m ² of floor space	\$2.83	\$3.06
	(minimum charge \$8.25)	(minimum charge \$8.25)
Bulk water users		
	annual user fee \$104.30	annual user fee \$112.64
	plus \$10.47 per	plus \$11.31 per
	4,546 L	4,546 L
Inspecting waterworks Installations		
	\$76.95 per hour	\$83.11 per hour
Builder and Developer Charges		
Frontage charge per metre for existing mains		
Residential	\$139.53 per metre	\$150.69 per metre
Commercial, Industrial and Institutional	\$148.40 per metre	\$160.27 per metre